

Remarks

Applicants thank the Examiner for the thorough and complete examination. Applicants have amended the claims to provide further clarity and particularly point out the technical features and subject matter claimed.

Claims 1-13, 15-28, and 30-34 are pending. Claims 14 and 29 are canceled. Claim 34 has been added. Claims 1, 6, 9, 10 and 19 are amended.

Amendments to independent claims 1 and 19 clarify principal invention features in these claimed methods pertaining to applying an aqueous coating on a metal substrate; that the step of bringing the substrate into contact is in a first aqueous autodepositing composition; and that articulating the substrate occurs after removal from said the aqueous composition or articulating both while immersed and after removal. New claim 34 pertains to a coating method in which articulation occurs either during or after removal or both, further characterized by a particular minimum displacement of the composition in the bath and bath turnover.

[5.] Claims 1-3, 5-11, 12-13, 15-16, 19-21, 23-26, and 27-31 were rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/43131 by Kucera et al. ("Kucera") in view of US Patent 4766844 by Brewer et al ("Brewer"). Applicants respectfully traverse the rejection.

Applicants agree in respect of claims 1, 5, 6, 12, 19, 23, and 27 that Kucera teaches aqueous autodepositable coatings for electrochemically active (pg. 21, line 19) metal substrates by dipping (pg. 19, line 11) into an autodepositing bath. No teaching or suggestion is found in the primary reference to modify the dipping, other than the ordinary dipping, which owing to the inherent horizontal surface of the water must be a vertical motion. Inadequacies arise with this method. Kucera reveals no inadequacy of this method in any respect, however Applicants have pointed out critical improvements obtained as explained in Applicants' specification. Applicants

acknowledge the teachings of Kucera et al in respect of a second dipping bath and subsequent drying (Example 3 was referenced by the Office). However, Kucera does not teach of grasping the substrate with an articulate electromechanical device and articulating the substrate. As pointed out, Kucera et al do not teach or introduce a motivation to modify the process to account for flow characteristics of the wet film.

Brewer teaches tinning metal leads by immersion in flux, reorienting the substrate to align other leads with flux and repeating the process for applying molten solder. The reorientation of the fixture to orient additional leads bears no technical nexus to the present invention. Brewer must process the fixture in this way in order to treat all of the electrical leads with flux and molten metal. Such metallization coatings bear no technical or industrial relation to aqueous coatings of the present invention.

References must be read as a whole for what they teach or suggest to one of ordinary skill in the art, and for what they teach against. *W.L. Gore & Assocs. v. Garlock, Inc.*, 721 F.2d 1540, 1550-51, 220 USPQ 303, 311 (Fed. Cir. 1983). The Office has represented Brewer et al as nothing more than applying coatings in the abstract, ignoring the technical and industrial context of the reference, which is a metallation process involving molten metal. A molten metal solidifies instantly upon the slightest cooling below its melting point. Whereas a dilute aqueous dispersion of an organic polymer is distinctly different with different attendant problems. One having ordinary skill in the art, taking Kucera et al as a point of reference does not reference metallation art with any reasonable expectation of making a modification to Kucera. In this context, both Kucera and Brewer et al involve dipping and are silent with respect to articulation in the bath. The articulation shown in Brewer et al as pointed out is to orient the substrate to dip adjacent leads. The articulation occurs after solidification as this is instantaneous as the leads are withdrawn.

Applicants respectfully submit that a prior art reference is analogous if the reference is in the field of applicant's endeavor, or if not, it is reasonably pertinent to the particular

problem with which the inventor was concerned. In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). Applicants submit that neither the subject of tinning, nor the problems attendant in coatings based on aqueous polymer dispersions relate in any way to tinning. Therefore, it is reasonable to recognize that tinning art is non-analogous to the invention and the primary reference. In tinning, Brewer et al, withdraws the arrays by lifting slowly. This is not articulation of a wet film and has not technical object other than to reorient the substrate for the next dipping step. (Brewer, Column 2, line 57).

That the Office can reconstruct the prior art in piecemeal fashion to make a crude facsimile of the claimed invention, recognizing certain basic elements (e.g. the concept of a "coating") and disregarding the true technical context when the instant invention has been particularly pointed out and distinguished does not afford the basis for a conclusion of obviousness unless the logic and reasoning employed also supplies sufficient impetus to have led one of ordinary skill in the art to combine the teachings of the references to make the claimed invention. Ex Parte Levengood, 28 USPQ 2d 1300 (Bd. Pat. App. & Inter. 1993). Beyond this legal point of reference, the combination of teachings are not properly combinable.

In respect of claims 16, 30, and 31 the prior art fails to disclose a substrate displacing at least 0.25% of the volume of the immersion bath and a bath turnover of 1 hour to 5 days. The prior art does not teach or suggest any parameters relating to substrate % displacement of the bath, and specified rapid bath turnover. Attendant problems have been observed in the conventional dip-coatings of Kucera, the present and former inventor of the primary reference. Kucera et al and Brewer et al are not suggestive of such a modification of the process to relate the geometry of the coating bath with the surface area of the substrate, leading one of ordinary skill to make such a modification.

However, the Office concludes baldly that this prior art and the present claims, as reflected by claims 11 and 25 teach the same process steps and thus the results

obtained by applicants process must necessarily be the same as those obtained by the prior art. This sounds in an inherency but is properly applied as a novelty issue. Applicants point out the legal principals involved in holding of inherency must at the least present a showing of enabling prior art, which has not been presently shown. In respect of claim 4, bald conclusions do not provide filling of gaps in the prior art, nor is Applicants' own disclosure properly regarded in hindsight. The conclusion by the Office provides an insufficient foundation for a showing of inherency, and is not a valid grounds under 35 U.S.C 103. The relationship between the substrate displacement relative to the immersion bath and bath turn-over are critical and novel contributions. Nothing of the cited prior art is suggestive nor motivating of such a feature and relationship to improvements shown. The conclusion of a general nature to the effect that immersing a metal object into a metal treatment bath to form a uniform coating of micron size of the prior art must necessarily provide the same substrate displacement and bath turnover is therefore incorrect and the rejection of claim 4 should be removed.

[6.] Claims 4, 14, 15, 22, and 29 were rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/43131 by Kucera et al. ("Kucera") in view of US Patent 4766844 by Brewer et al ("Brewer") and further in view of US Patent 4657788 by Benton et al ("Benton"). In respect of Claims 4 and 22 Kucera in view of Brewer is applied as in [5].

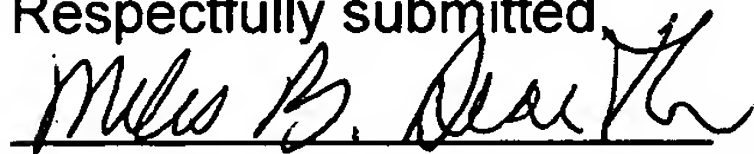
Benton, teaching autodepositing coating on metal substrates, discloses agitating the coating composition while immersing the metal substrate helps in forming a uniform coating, which can be accomplished by moving the substrate in the coating bath (Column 5, lines 37-43). Benton does not disclose articulation after removal from contact with the liquid. With regard to new claim 34, Benton does not teach or

suggest, or fill in the gap from the other references which are silent in regard to the specified displacement and bath turnover rate.

In respect of Claims 14 and 29, now canceled, the rejection is mooted.

Applicants respectfully request removal of the rejection under 35 U.S.C 103 (a) over claims 1 and 19, and claims depending therefrom as these are patentably distinguished by the foregoing unobvious features, taken as a whole in view of the art applied as a whole, without regard solely to Applicant's own novel features.

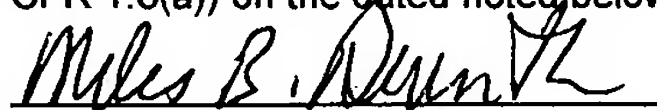
Respectfully submitted



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Date: 6-8-05

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